

### **REMARKS**

The Examiner objected to the drawings as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference characters not mentioned in the description: elements LED30, R30, R50, Q30 and Q40 in Figure 3.

Amendments to the specification to add these reference characters in the description in compliance with 37 CFR 1.121(b) have been provided. In particular, the paragraph [0025] has been amended to include the above-mentioned reference characters.

The Examiner rejected claims 1, 2 and 4-7 under 35 U.S.C. 103(a) as being unpatentable over Hiller, US Patent No. 5,218,307.

Hiller discloses a fault detection device for testing conductor-to-conductor and conductor-to-ground faults in multiple conductor shielded cables (Abstract). Fig. 1 shows a three-conductor shielded cable, the three conductors 38a, 38b, and 38c within a shielded cable 10, along with fault detection circuitry for impact testing cables. During an impact test, one end of each conductor is connected to a conductor clamp, and the other end of each conductor in the cable is left unconnected and is allowed to float. A ground wire is connected to the armor shield on the cable and to a test block. A voltage source is then enabled and a distinct voltage phase is applied to each relay in the fault detection circuitry. Each relay remains de-energized because both ends of the relay coil are at the same potential. The test block is then dropped on a portion of the cable. If the impact resistance of the cable is exceeded and two conductors in the cable are shorted together, a potential difference is created thereby allowing current to flow, energizing the corresponding relays. (Col. 5, Lines 26-51)

Hiller discloses a fault detection device only for an out of service multiple conductor cable having an outer conductive shield (Col. 8, Lines 22-24).

In contrast, the present invention relates to a fieldbus network and, more particularly, to a short circuit detector to protect a fieldbus network from an electrical short between the network's power/data wires and a shield connection. In other words, the present invention provides short circuit detection for an in-service fieldbus network.

Claims 1 and 4 patentably distinguish over Hiller by claiming, in part, a short circuit detector for a fieldbus network, said network comprising a positive lead, a negative lead, a

one of said positive lead and said negative lead, and power circuitry transmitting power on at least one of said positive lead and said negative lead.

Hiller neither discloses nor suggests a fault detection device for anything similar to an in-service fieldbus network.

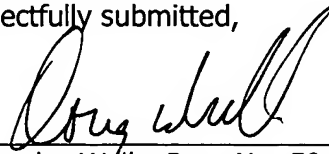
Claims 2, 3 and 7-10 depend from claim 1 and are patentable for at least the same reasons asserted for claim 1.

Claims 5 and 6 depend from claim 4 and are patentable for at least the same reasons asserted for claim 4.

In conclusion, Applicant respectfully submits that claims 1-10 are now in a condition for allowance, and Applicant respectfully requests allowance of such claims.

If the Examiner believes that direct contact with Applicant's attorney would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the number below.

Respectfully submitted,



---

J. Douglas Wells, Reg. No. 50,477  
Telephone No.: (503) 227-5631